MAT-8704US

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Number: Issued: 7,304,459 B2 December 4, 2007

Name of Patentee:

Matsushita Electric Industrial Co., Ltd.

Title of Invention: SYN

SYNCHRONOUS RECTIFICATION MODE DC-TO-DC

CONVERTER POWER SUPPLY DEVICE

REQUEST FOR CERTIFICATE OF CORRECTION OF PATENT FOR PTO MISTAKE (37 C.F.R. § 1,322(a))

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Attention: Certificate of Correction Branch

1. Attached is Form PTO/SB/44.

Correction of the Official Letters Patent is respectfully requested in view of the following text which appears correctly in the application file:

At Column 9, line 14, insert -- is -- between "element" and "longer", as indicated in claim 2, line 4, of the Amendment filed August 16, 2007.

At Column 10, line 3, insert -- is -- between "element" and "longer" as indicated in claim 4, line 4, of the Amendment filed August 16, 2007.

At Column 10, line 4, "elements" should read -- element --, as indicated in claim 4, line 5, of the Amendment filed August 16, 2007.

3. Please send the Certificate to:

Name: Lawrence E. Asherv

P.O. Box 980 Valley Forge, PA 19482 (610) 407-0700 Name of Assignee:

Matsushita Electric Industrial Co., Ltd.

Assignment Recorded on: June 8, 2005

Reel:

017414

Frame:

0245

Respectfully submitted,

Lawrence E. Ashery, Reg. No. 34,515 Attorney for Applicant

LEA/dmw

Enclosure:

Form PTO/SB/44 Copy/Page 3 of 08/16/2007 Amendment Copy/Page 4 of 08/16/2007 Amendment

Dated: February 19, 2008

P.O. Box 980 Valley Forge, PA 19482 (610) 407-0700

244394

Application No.: 10/538,051 Amendment Dated August 16, 2007 Reply to Office Action of May 17, 2007

CONTRACTOR MAT-8704US

drive pulse from the oscillation control meanscircuit;

a second switching element being driven by the output of the second drive meanscircuit;

- a second rectifying means<u>circuit</u> having a positive electrode being ground and a negative electrode being connected to the output of the second switching element;
- a third switching element being connected in parallel to the second rectifying meanscircuit and driven by the output of the first drive meanscircuit; and
 - a second coil being connected to the output of the second switching element; and

wherein the third switching element is turned on during an OFF period of the first switching element and turned off during an ON period of the first switching element.

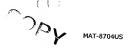
 (Currently Amended) The synchronous rectification mode DC-to-DC converter power supply device according to claim 1, wherein

an OFF period of the second switching element includes-anis langer than the OFF period of the first switching element.

- a timing when the first switching element is turned off is later than a timing when the second switching element is turned off, and
- a timing when the second switching element is turned on is later than a timing when the first switching element is turned on.
- (Currently Amended) The synchronous rectification mode DC-to-DC converter power supply device according to claim 1, further comprising a third switching power supply <u>circuit</u>means for carrying out synchronous rectification based on the drive pulse of the second switching power supply means<u>circuit</u>, wherein

the third switching power supply means-circuit comprises:

Application No.: 10/538,051 Amendment Dated August 16, 2007 Reply to Office Action of May 17, 2007



a third drive means-<u>circuit</u> for outputting a drive waveform-<u>voltage</u> based on the drive pulse from the oscillation control means<u>circuit;</u>

- a fourth switching element driven by the output of the third drive meanscircuit;
- a third rectifying means-<u>circuit</u> having a positive electrode being grounded and a negative electrode being connected to the output of the fourth switching element;
- a fifth switching element being connected in parallel to the third rectifying means <u>circuit</u> and being driven by the output of the second drive meanscircuit; and
 - a third coil connected to an output of the fourth switching element

wherein the fifth switching element is turned on during an OFF period of the second switching element and turned off during an ON period of the second switching element.

4. (Currently Amended) The synchronous rectification mode DC-to-DC converter power
supply device according to claim 3, wherein, an OFF-period of the second switching element
includes an OFF period of the first switching element, and
1/
an OFF period of the third-fourth_switching element includes anis longer than the OFF
period of the second switching element,
R
a timing when the second switching element is turned off is later than a timing when
the fourth switching element is turned off, and

a timing when the fourth switching element is turned on is later than a timing when the second switching element is turned on.

 (Currently Amended) The synchronous rectification mode DC-to-DC converter power supply device according to claim 1, further comprising a sixth switching element being connected in parallel to the first rectifying means-circuit and driven by the output of the oscillation control meanscircuit.

UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO: 7,304,459

PAGE 1 OF 1

PATENT ISSUED:

December 4, 2007

APPLICATION NO.: APPLICATION DATED: 10/538.051

APPLICATION DATED: JUNE 8, 2005
INVENTOR(S): SHUJI KAZUMA

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 9

Line 14, insert -- is -- between "element" and "longer".

Column 10

Line 3, insert -- is -- between "element" and "longer".

Line 4, "elements" should read -- element --.

Mailing Address of Sender:

RatnerPrestia P.O. Box 980 Valley Forge, PA 19482 (610) 407-0700

This collection of information is required by 37 CFR 1.322, 1.323 and 1.324. The information is required to obtain or main a benefit by the public vertice to the field may be utility to USFT to proceed an application. Confidentially its generated by 58 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USFTO. Then will vary depending upon the individual case. Any comments on the amount of time by our require to complete this form and/or supperison. The variety of the complete the form and/or supperison are considered by the complete the form and/or supperison. The variety of the complete the form and/or supperison the form and/or supperison. The complete the form and/or supperison the supperison that the control of the complete the form and/or supperison. The complete the form and/or supperison that the complete the form and/or supperison that the complete the form and/or supperison. The complete that th